AMENDMENTS TO THE CLAIMS:

1. (Previously presented) A correlator that receives an input signal including a fixed pattern formed by spreading a predetermined number of symbols with pseudorandom noise code wherein the predetermined number of symbols comprises a fixed word, comprising:

a first sub-correlator; and

a second sub-correlator,

wherein said first sub-correlator detects correlation between said input signal and said pseudorandom noise code for one symbol length,

wherein said second sub-correlator detects correlation between a correlation value output from said first sub-correlator and said fixed word for said predetermined number of symbols,

wherein said second sub-correlator comprises a number of second sub-correlators, and

wherein said number is determined in accordance with a number of different fixed words.

2. (Canceled).

3. (Previously presented) The correlator as set forth in claim 1, further comprising:

maximum detecting means for receiving an output transmitted from said plurality of second sub-correlators, and outputting a maximum signal for informing synchronous detection when a correlation value transmitted from each of said second sub-correlators comprises a maximum.

4. (Currently amended) A correlator comprising:

a first sub-correlator that receives a fixed pattern including a code length N ($N = M \times K$), as an input signal comprised of signals obtained by spreading a fixed word

having a length of K, at a rate of M chips/symbol, and detects a correlation value between a k-th ($0 < k < K$) symbol including an M chip length, among said fixed pattern, and pseudorandom noise code Sm, wherein m comprises an integer defined as $k \times M < m < \underline{((k + 1) \times M)}$ $\cancel{(k + 1) \times M}$ and M and K comprise predetermined positive integers; and

a second sub-correlator that receives data corresponding to K symbols, including a correlation value output from said first sub-correlator, and outputs a correlation value between said data and said fixed word,

wherein said second sub-correlator comprises a number of second sub-correlators, and

wherein said number is determined in accordance with a number of different fixed words.

5. (Currently amended) A correlator comprising:

a first sub-correlator that receives a fixed pattern having a code length N ($N = M \times K$), as an input signal comprised of signals obtained by spreading a fixed word having a length of K symbols, at a rate of M chips/symbol, and detects a correlation value between a k-th ($0 < k < K$) symbol having a M chip length, among said fixed pattern, and pseudorandom noise code Sm, wherein m comprises an integer defined as $k \times M < m < \underline{((k + 1) \times M)}$ $\cancel{(k + 1) \times M}$ and M and K comprise predetermined positive integers;

a memory that stores a predetermined number of correlation values per symbol, said correlation values being transmitted from said first sub-correlator and different in a phase from one another with respect to said input signal, and that stores correlation values substantially corresponding to K symbols; and

a second sub-correlator that receives a data corresponding to K symbols, which is read from said memory for each of said predetermined number, and outputs a correlation value between said data and said fixed word.

6. (Currently amended) A correlator which receives a fixed pattern having a code length N ($N = M \times K$) which fixed pattern is obtained by spreading a fixed word having a length of K symbols, at a rate of M chips/symbol, comprising:

a first sub-correlator which receives said fixed pattern as an input signal, and detects a correlation value between a k-th ($0 < k < K$) symbol including an M chip length, among said fixed pattern, and pseudorandom noise code Sm, wherein m comprises an integer defined as $k \times M < m < \underline{((k + 1) \times M)}$ $\cancel{(k + 1) \times M}$ and M and K comprise predetermined positive integers;

a memory that stores a predetermined number (L) of correlation values per symbol, said correlation values being transmitted from said first sub-correlator and different in a phase from one another with respect to said input signal, and that stores L x K correlation values substantially corresponding to K symbols;

a reading-address controller that outputs a reading-address for reading data corresponding to K symbols from said memory for each of said L correlation values; and

a second sub-correlator that receives said data corresponding to K symbols, which is read from said memory for each of said L correlation values, and outputs a correlation value between said data and said fixed word.

7. (Previously presented) The correlator as set forth in claim 6, further comprising:

a writing-address controller that outputs a writing-address,

wherein a correlation value output from said first sub-correlator is written into an address in said memory, said address being designated by said writing-address controller.

8. (Previously presented) The correlator as set forth in claim 5, wherein said second sub-correlator comprises a number of second sub-correlators, and

wherein said number is determined in accordance with a number of different fixed words.

9. (Previously presented) The correlator as set forth in claim 6, wherein said second sub-correlator comprises a number of second sub-correlators, and

wherein said number is determined in accordance with a number of different fixed words.

10. (Previously presented) The correlator as set forth in claim 8, further comprising:

maximum detecting means for receiving an output transmitted from at least one of said plurality of second sub-correlators, and outputting a maximum signal for informing synchronous detection when a correlation value transmitted from one of said at least one of said plurality of said second sub-correlators comprises a maximum.

11. (Previously presented) The correlator as set forth in claim 9, further comprising:

maximum detecting means for receiving an output transmitted from at least one of said plurality of second sub-correlators, and outputting a maximum signal for informing synchronous detection when a correlation value transmitted from one of said at least one of said plurality of said second sub-correlators comprises a maximum.

12. (Previously presented) The correlator as set forth in claim 5, further comprising:

a code switch that switches said pseudorandom noise code for detecting correlation with said input signal.

13. (Previously presented) The correlator as set forth in claim 6, further comprising:

a code switch that switches said pseudorandom noise code for detecting correlation with said input signal.

14. (Previously presented) The correlator as set forth in claim 5, wherein said correlation values being different in a phase from one another, comprise correlation values including phases different from one another by one or ½ chip.

15. (Previously presented) The correlator as set forth in claim 6, wherein said correlation values being different in a phase from one another, comprise correlation values including phases different from one another by one or ½ chip.

16. (Previously presented) The correlator as set forth in claim 5, wherein said memory comprises a dual port type random access memory.

17. (Previously presented) The correlator as set forth in claim 6, wherein said memory comprises a dual port type random access memory.

18. (Canceled).

19. (Currently amended) A correlator comprising:

a first sub-correlator that receives a fixed pattern having a code length N ($N = M \times K$), as an input signal comprised of signals obtained by spreading a fixed word having a length of K symbols, at a rate of M chips/symbol, and detects a correlation value between a k-th ($0 < k < K$) symbol including an M chip length, among said fixed pattern, and pseudorandom noise code Sm, wherein m comprises an integer defined as $k \times M < m <$ $((k + 1) \times M)$ ~~(k + 1) × M~~ and M and K comprise predetermined positive integers;

a memory that stores a predetermined number of correlation values per symbol, said stored correlation values being transmitted from said first sub-correlator and different in a phase from one another with respect to said input signal, and that stores correlation values substantially corresponding to K symbols; and

a comparator that compares K stored correlation values transmitted from said first sub-correlator to said fixed word to check whether they are coincident with each other.

20. (Currently amended) A correlator which receives a fixed pattern having a code length N ($N = M \times K$), wherein the fixed pattern is obtained by spreading a fixed word having a length of K symbols at a rate of M chips/symbol, comprising:

a first sub-correlator which receives said fixed pattern as an input signal, and detects a correlation value between a k-th ($0 < k < K$) symbol including an M chip length, among said fixed pattern, and pseudorandom noise code Sm, wherein m comprises an integer defined as $k \times M < m < ((k + 1) \times M)$ $\cancel{(k + 1) \times M}$ and M and K comprise predetermined positive integers;

a memory that stores a predetermined number (L) of correlation values per symbol, said stored correlation values being transmitted from said first sub-correlator and different in a phase from one another with respect to said input signal, and that stores L x K correlation values substantially corresponding to K symbols;

a reading-address controller that outputs a reading-address for reading data corresponding to K symbols from said memory for each of said L correlation values; and

a comparator that compares K stored correlation values transmitted from said first sub-correlator to said fixed word to check whether they are coincident with each other.

21. (Previously presented) A CDMA (Code Division Multiple Access) communication device including a correlator which receives an input signal including a fixed pattern formed by spreading a predetermined number of symbols comprising a fixed word, with pseudorandom noise code, comprising:

a first sub-correlator of said correlator; and

a second sub-correlator of said correlator,

wherein said first sub-correlator detects correlation between said input signal and said pseudorandom noise code for one symbol length, and

wherein said second sub-correlator detects correlation between a correlation value output from said first sub-correlator and said fixed word for said predetermined number of symbols,

wherein said second sub-correlator comprises a number of second sub-correlators, and

wherein said number is determined in accordance with a number of different fixed words.

22. (Currently amended) A CDMA (Code Division Multiple Access) communication device including a correlator comprising:

a first sub-correlator that receives a fixed pattern including a code length N ($N = M \times K$), as an input signal comprised of signals obtained by spreading a fixed word having a length of K symbols, at a rate of M chips/symbol, and detects a correlation value between a k-th ($0 < k \times < K$) symbol including an M chip length, among said fixed pattern, and pseudorandom noise code Sm, wherein m comprises an integer defined as $k \times M < m <$ $\underline{((k + 1) \times M)}$ $\cancel{(k + 1) \times M}$ and M and K comprise positive integers; and

a second sub-correlator that receives data corresponding to K symbols, including a correlation value output from said first sub-correlator, and outputs a correlation value between said data and said fixed word, ~~and~~

wherein said second sub-correlator comprises a <u>number</u> ~~plurality~~ of second sub-correlators<u>, and wherein said</u> [[a]] number ~~of which~~ is determined in accordance with <u>a number of different fixed words</u> ~~types of said fixed word~~.

23. (Currently amended) A CDMA (Code Division Multiple Access) communication device including a correlator comprising:

a first sub-correlator that receives a fixed pattern having a code length N ($N = M \times K$), as an input signal comprised of signals obtained by spreading a fixed word having a length of K symbols, at a rate of M chips/symbol, at a rate of M chips/symbol, and detects a correlation value between a k-th ($0 < k < K$) symbol including an M chip length, among said fixed patterns, and pseudorandom noise code Sm, wherein m comprises an integer defined as $k \times M < m <$ $\underline{((k + 1) \times M)}$ $\cancel{(k + 1) \times M}$ and M and K comprise predetermined positive integers;

a memory that stores a predetermined number of correlation values per symbol, said correlation values being transmitted from said first sub-correlator and different in a phase from one another with respect to said input signal, and that stores correlation values substantially corresponding to K symbols; and

a second sub-correlator that receives data corresponding to K symbols, which is read from said memory for each said predetermined number, and outputs a correlation value between said data and said fixed word.

24. (Currently amended) A CDMA (Code Division Multiple Access) communication device including a correlator that receives a fixed pattern having a code length N ($N = M \times K$), said fixed pattern being obtained by spreading a fixed word having a length of K symbols at a rate of M chips/symbol,

said correlator comprising:

a first sub-correlator having a correlation value between a k-th ($0 < k < K$) symbol having a M chip length, among said fixed pattern, and pseudorandom noise code Sm, wherein m comprises an integer defined as $k \times M < m < \underline{((k + 1) \times M)}\ \cancel{(k + 1) \times M}$ and M and K comprise predetermined positive integers;

a memory that stores a predetermined number (L) of correlation values per symbol, said correlation values being transmitted from said first sub-correlator and different in a phase from one another with respect to said input signal, and that stores $L \times K$ correlation values substantially corresponding to K symbols;

a reading-address controller that outputs a reading-address for reading data corresponding to K symbols from said memory for each of said L correlation values; and

a second sub-correlator that receives said data corresponding to K symbols, which is read from said memory for each of said L correlation values, and outputs a correlation value between said data and said fixed word.

25. (Currently amended) A spread spectrum type communication device comprising a correlator that performs synchronization capture,

said correlator comprising:

a first sub-correlator that detects correlation between an input signal and pseudorandom noise code for inverse-spreading said input signal having been spectrum-spread; and

a second sub-correlator that detects correlation between a predetermined number of correlation outputs transmitted from said first sub-correlator [[,]] and a synchronization pattern,

wherein said second sub-correlator comprises a number of second sub-correlators, and

wherein said number is determined in accordance with a number of different fixed words.

26. (Currently amended) A spread spectrum communication device comprising a correlator that performs synchronization capture,

said correlator comprising:

a first sub-correlator that detects correlation between an input signal and pseudorandom noise code for inverse-spreading said input signal having been spectrum-spread; and

~~a comparator that compares a predetermined number of correlation outputs transmitted from said first sub-correlator to a synchronization pattern for checking whether they are coincident with each other, and~~

a second sub-correlator comprising a number of second sub-correlators, ~~and~~

wherein said number is determined in accordance with a number of different fixed words, and

wherein said second sub-correlator includes a comparator that compares a predetermined number of correlation outputs transmitted from said first sub-correlator to a synchronization pattern for checking whether they are coincident with each other.

27. (Previously presented) A correlator comprising:

a first sub-correlator; and

a second sub-correlator,

wherein said first sub-correlator receives an input signal including a fixed pattern formed by spreading a predetermined number of symbols with pseudorandom noise code, said symbols including a fixed word,

wherein said first sub-correlator detects correlation between said input signal and said pseudorandom noise code for one symbol length and outputs a first correlation value, and

wherein said second sub-correlator detects correlation between said first correlation value and said fixed word for said predetermined number of symbols and outputs a second correlation value,

wherein said second sub-correlator comprises a number of second sub-correlators, and

wherein said number is determined in accordance with a number of different fixed words.

28. (Currently amended) A correlator comprising:

a first sub-correlator; and

a second sub-correlator,

wherein said first sub-correlator receives a fixed pattern including a code length N, as an input signal comprised of signals obtained by spreading a fixed word including a length of K symbols, at a rate of M chips/symbol,

wherein said first sub-correlator detects a correlation value between a k-th symbol including an M chip length, among said fixed pattern, and pseudorandom noise code Sm,

wherein said second sub-correlator receives data corresponding to K symbols, including a correlation value output from said first sub-correlator, and outputs a correlation value between said data and said fixed word,

wherein $N = M \times K$, M and K comprise predetermined positive integers, $0 < k < K$, and m comprises an integer defined as $k \times M < m < \underline{((k + 1) \times M)}$ $\cancel{(k + 1) \times M}$,

wherein said second sub-correlator comprises a number of second sub-correlators, and

wherein said number is determined in accordance with a number of different fixed words.

29. (Previously presented) A correlator comprising:

means for receiving an input signal including a fixed pattern formed by spreading a predetermined number of symbols with pseudorandom noise code, said symbols including a fixed word, detecting correlation between said input signal and said pseudorandom noise code for one symbol length, and outputting a first correlation value;

means for detecting correlation between said first correlation value and said fixed word for said predetermined number of symbols and outputting a second correlation value, and

means for receiving said second correlation value, said means comprising a number of second sub-correlators,

wherein said number is determined in accordance with a number of different fixed words.

30. (Currently amended) A correlator comprising:

means for receiving an input signal including a fixed pattern including a code length N, said input signal comprising signals obtained by spreading a fixed word including a length of K symbols, at a rate of M chips/symbol, and detecting a correlation value between a k-th symbol including an M chip length, among said fixed pattern, and pseudorandom noise code Sm, and

means for receiving data corresponding to K symbols, including a correlation value output from a first sub-correlator, and outputting a correlation value between said data and said fixed word,

wherein $N = M \times K$, M and K comprise predetermined positive integers, $0 < k < K$, and m comprises an integer defined as $k \times M < m <$ $\underline{((k+1) \times M)}$ $\cancel{(k+1) \times M}$,

wherein said means for receiving <u>data</u> comprises a number of second sub-correlators, and

wherein said number is determined in accordance with a number of different fixed words.

31. (Previously presented) The correlator as set forth in claim 28, further comprising:

a memory,

wherein said memory stores a predetermined number of correlation values per a symbol, said correlation values being transmitted from said first sub-correlator and different in a phase from one another with respect to said input signal, and

wherein said memory stores correlation values substantially corresponding to K symbols.

32. (Previously presented) The correlator as set forth in claim 31, wherein said second sub-correlator reads from said memory for each of said predetermined number.

33. (Previously presented) The correlator as set forth in claim 31, further comprising:

a writing-address controller that outputs a writing-address,

wherein a correlation value output from said first sub-correlator is written into an address in said memory, said address being designated by said writing-address controller.

34. (Canceled).

35. (Currently amended) The correlator as set forth in claim <u>28</u> [[34]], further comprising:

means for receiving an output transmitted from at least one of said plurality of second sub-correlators and outputting a maximum signal for informing synchronous detection when a correlation value transmitted from one of said at least one of said plurality of said second sub-correlators comprises a maximum.

36. (Previously presented) A correlator that detects correlation for data including a predetermined length, comprising:

a plurality of sub-correlators,

wherein each of the sub-correlators comprises a length equal to a divisor of the predetermined length, and

wherein a correlation value output from one of the plurality of sub-correlators is received by another of the plurality of sub-correlators disposed downstream of the one of the plurality of sub-correlators, and

wherein a number of said plurality of sub-correlators is determined in accordance with said divisor of said predetermined length.